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On the fluidity of bones in Mongolic and beyond

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This paper examines the fact that the words for 'bone' in Mongolic and Tungusic belong to a formal class containing a marker that normally refers to uncountable homogeneous substances, especially liquids. While there may be several factors underlying this curious situation, some possible light is shed on the issue by Turkic data, which suggest a semantic confusion between 'bone' and 'bone marrow.' Another phenomenon that deserves attention in this context is the use of the concept of 'bone' to indicate genetic lineages or 'tribes' in the nomadic society.

Keywords: Mongolic, Tungusic, Turkic, internal reconstruction, class markers, semantic transitions

0. Introduction

Although the languages termed "Altaic" have in the past been investigated in a spirit of genetic comparisons, current understanding is that their shared features are the result of areal contacts. However, these contacts have been so multiple, prolonged and intensive that it is often impossible to study data from a given "Altaic" language without considering the others. This concerns not only the material and formal similarities shared by these languages due to lexical borrowing and grammatical interaction, but also the semantic developments and transitions that have taken place in them. This

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is shown below with material pertaining to the semantic sphere of 'bone' and related concepts. In this paper, only the languages today also known as "Core Altaic," that is, Turkic, Mongolic, and Tungusic, are considered, since these are the "Altaic" entities that show the largest amount of unambiguous areal parallels. For reasons connected with the specific research problem the discussion will proceed from Mongolic to Tungusic to Turkic.

1. The Mongolic data

The Mongolic word for 'bone' is **yasu/n.* This looks like a basic vocabulary item, but it contains the final element **-sU/n*, which is also attested as a suffix, suggesting the division **ya-su/n.* The suffix **-sU/n* is widely used as an element added to bisyllabic or longer roots, some of which have counterparts in Turkic, e.g. Mongolic **balga* : **balga-su/n* 'town, city' : (plural) *balga-d*, borrowed from Pre-Proto-Turkic **balka* > Turkic **balïk* id. It is often encountered in names of plants and animals, as in **xulïya-su/n* 'poplar,' **nugu-su/n* 'duck.'[1] In these items, the suffix **-sU/n* has no particular function, except that it would seem to indicate singular number of countable concepts, since it is normally dropped in the corresponding plural forms (cf., e.g., Poppe 1955: 179). Even so, it is not a singulative marker, for it can also be used in nouns denoting uncountable homogeneous substances, as in **xüne-sü/n* 'ash, ashes.'

Importantly, it happens that uncountable homogeneous substances, especially liquids and "liquifiables," prevail among items in which the element **-sU/n* stands after a monosyllabic base consisting of a maximally simple sequence of the type (C)V. Virtually all items of this structural type belong to the same semantic field: **u-su/n* 'water,' **üsü/n* 'milk' (secondarily also > *sün*, *süüi*), **ca-su/n* 'snow,' **cï-su/n* 'blood,' **nï-su/n* 'nasal mucus,' **to-su/n* 'oil, butter,' but note also **xü-sü/n* 'hair' and possibly **ï-su/n* ~ **i-sü/n* 'soot' (Nugteren 2011: 377). In this connection, we may divide the element **-sU/n* in three segmental components: **-s-*, which is the actual functional suffix, **-U-*, which serves as a connective vowel with no semantic load, and

1) Unless otherwise indicated, the Mongolic words are given in a close-to-phonemic transcription corresponding to the chronological level of Proto-Mongolic, which is more or less identical with the historically attested forms of Middle Mongol. Actual reconstructions are marked by the asterisk (*). For the Mongolic glosses, cf. MED.

*-*n*, which represents another suffixal element with no clear function but known as the "unstable" or "fleeting" *n*, because it can be absent in some forms of the nominal paradigm.[2)] It may be concluded that the segment *-*s*- functions in these items as an obscured class suffix for uncountable homogeneous substances, especially liquids and "liquifiables" (cf., e.g., Janhunen 2003: 13).

Apart from the items mentioned above there are only a few other examples containing the suffix *-*s.U/n* after a simple monosyllabic root, and in some of them the root has actually been shortened by the loss of a final consonant, i.e., *CVC- > CV-. A case in point is the numeral **ye-sü/n* 'nine,' which is based on the root **yer-*, as preserved in Bonan *yirsong* 'nine' and confirmed by **yer-e/n* 'ninety' (Nugteren 2011: 545–546). Two other examples are **mö-sü/n* 'ice' and **sö-sü/n* 'bile,' which semantically fall in the category of liquids and "liquifiables," but which in reality are based on the roots **möl*(*i*)- and **söl-*, respectively, cf. Khamnigan Mongol *mulihu/n* (Janhunen 1990: 90) = Bonan *melsong* 'ice,' Buryat *hülhe/n* 'bile' (Nugteren 2011: 447, 503). There remain **yosu/n* 'custom' and **nasu/n* '(year of) age.' For the latter the reconstruction **nal-su/n* has been proposed to make it compatible with Turkic **ya:sh* id. (Ramstedt 1952–1966: 2: 75, 110), but in this case there is no internal confirmation of a lost consonant, leaving the proposal unconfirmed and hypothetical. Quite possibly, both **yosu/n* and **nasu/n* are simply underived nominal words based on bisyllabic roots of the type *CVCV-.[3)]

Incidentally, the item for 'bone' is also attested with a root-final consonant in one Mongolic language, Minhe Mangghuer, from which the form *yagsï* has been recorded (Zhaonasitu & Li 1982: 474, quoted in Nugteren 2011: 544–545). This form has some age, since it is in agreement with data recorded already in the 19th century in the same (Sanchuan) region (Potanin 1893: 2: 415). Even so, it is very probably due to a secondary distortion, for both

2) On the unstable *n*, see, e.g., Poppe (1955: 185–187). The segment is here indicated by the slash, i.e., */n*. Lessing (MED) uses the notation (n).

3) An additional case of an underived noun of this type is **jüsü/n* 'face, complexion' (Nugteren 2011: 389–390), which for orthographical reasons is rendered in Written Mongol as **jisuv** = "*jisün*" (MED 1064). This must be a relatively recent borrowing from Common Turkic **yü:z* 'face' (EST 4: 259–260), which itself is a Turkic plural in *-*s* with no immediate relationship with the Mongolic class marker **s* (cf. Janhunen 2017).

Naringhol Mong(gh)uor (DMF 490–491) and Halchighol Mongghul (MGM 678), the two closest relatives of Minhe Mangghuer, show the shape *yasï*, with no trace of a root-final consonant. The most likely Proto-Mongolic reconstruction of the item for 'bone' is, therefore, **ya-s.u/n*.[4] However, the question concerning the original form of the root has no direct relevance to the discussion that follows, since our focus will be on the semantic aspects of the derivational category of 'liquids' and its relevance to 'bones.'

The formal association of **ya-s.u/n* 'bone' with the series of items denoting liquids and other homogeneous substances raises the question whether 'bones' could also be semantically associated with this semantic class. This is at first glance an unlikely possibility, since bones are typically well-delimited hard objects. In fact, Mongolic has another class marker, **-d-*, which is specifically used in items denoting countable and individualizable objects, as in **mo-d.u/n* 'tree' (> also: 'wood, woods, forest'), **ni-d.ü/n* 'eye,' **si-d.ü/n* 'tooth,' **so-d.u/n* 'quill,' **xö-d.ü/n* 'feather,' **xo-d.u/n* 'star' (Janhunen 2003: 13). The fact that 'bone' is not in this class would seem to suggest that the **-s-* in **ya-s.u/n* is not a class marker at all. However, this turns out to be a hastened conclusion, as is confirmed by Tungusic data.

2. The Tungusic data

Tungusic has a well-known set of class suffixes, considerably more transparent and more frequently attested than Mongolic **-s-* and **-d-*. Interestingly, the substance of the Tungusic class suffixes resembles that of their Mongolic counterparts, in that uncountable masses are indicated by the suffix **-sA-*, while items denoting countable objects contain the suffix **-tA-*. The reasons underlying this material and functional similarity are still unclarified, but the possibility of shared heritage in the context of a Khinganic (Mongolo-Tungusic) union cannot be ignored (Janhunen 1996). There is also a connection with plural markers in both languages. In most cases, the Tungusic class suffixes are preceded by other consonantal elements, which are probably

4) It may be mentioned that there is a similar root-final consonant in some of the Shirongolic cognates of **ca-s.u/n* 'snow.' In this case, also, Minhe Mangghuer has *-g-* (*cagsï*), while Xiazhuang Bonan has *-b-* (*cabsong*) and Santa *-n-* /N/ (*zhansun*). While these segments are certainly secondary, it is not clear whether they are mutually connected, for they might also reflect separate innovations in Minhe Mangghuer and Bonan-Santa (cf. Nugteren 2011: 299).

also original suffixes, though their function is no longer obvious. The two most commonly attested compound suffixes are **-g-sA-* for uncountables and **-g-tA-* for countables, but especially **-sA* occurs frequently also in combination with other consonants, including **l*, **n*, and **m* (Benzing 1956: 68–72).

The distribution of concepts between the classes of countables and uncountables is basically very similar in Mongolic and Tungusic. Thus, for concepts that involve the suffix **-d-* in Mongolic, the Tungusic counterparts (though not necessarily cognates) show the suffixal complex **-g-tA*, as in **xüi-gt*e 'tooth,' **xo:sï-gta* 'star,' while the concepts that involve the suffix **-s-* in Mongolic show the complex *-C-*sA* in Tungusic, as in **se-g-se* 'blood,' **ximö-g-se* 'oil,' **xïma-n-sa* 'snow.' There are, however, also occasional differences in this respect, but, importantly, the concept of 'bone' is classified as a "liquid" also in Tungusic: **gïra-m-sa* 'bone.' This suggests that the semantic affiliation of bones with liquids and similar substances has some underlying reason, which would seem to have an areal background.

In this connection it has to be noted that the Tungusic complex *-C-*sA* is not attested in Jurchen-Manchu, which uses the suffix *-nggi* instead. Even so, the Manchu word *gira-nggi* 'bone' belongs to the same class of "liquids" as, for instance, *se-nggi* 'blood.' Considering that Manchu preserves the element *-sA* intact in the composition of the collective marker **-sAl* (Benzing 1956: 71), it is obvious that the relationship between *-C-*sA* and *-nggi* cannot be explained phonologically. Instead, it has to be concluded that Manchu here simply uses a different morphological element (Alonso de la Fuente 2017). This, in turn, means that the Jurchenic branch differs for this point in a major way from the other Tungusic languages, indicating that it may have been the first entity to branch off Proto-Tungusic (as was already implied by Doerfer 1978). If the Manchu form *gira-nggi* derives from Proto-Tungusic, it will probably have to be reconstructed as **gïra-ngï* (with *ng* = [ŋ]). The phonological development would be the same as in, for instance, Manchu *inenggi* 'day' < Proto-Tungusic **ine-ngi* > Ewenki *inengi* [inəŋi]. The element **-ngi* is, however, not attested as a class marker in the other Tungusic languages.

Manchu also seems to preserve the basic root **gïra* and the derived stem **gïra-m* (without a class marker) in meanings related to 'bone': Manchu *gira-tu* 'big-boned (of livestock),' *gir-aqu* [mythological beast without bones], *gira-n* 'corpse' (CMED 141, CDSP 33 no. 751, SSTM 1: 154). Apart from 'bone,' Manchu *gira-nggi* can be used in reference to 'blood relatives.' This

is also true of Mongolic **ya-s.u/n*, which can have the meanings 'bone, skeleton, corpse,' but also 'clan, family, descent' (MED 430), that is, 'genetic lineage.' Related derivatives are **yasu-tai* 'having a (certain) descent' : (plural) **yasu-ta-n* 'those having a (certain) descent' > 'clan affiliation, ethnic group, tribe, people.' Even so, the basic meaning of both Mongolic **ya-s.u/n* and Tungusic **gïra-m-sa* | *giranggi* is 'bone.'

The meaning 'lineage' offers one possible line of explanation for the "fluidity" of bones, since genetic lineages may be conceptualized as "fluid" and lacking a physical shape. Moreover, there is a semantic connection with 'blood,' which can also refer to blood lineages. In fact, the Manchu word *senggi* 'blood' has been borrowed in this very form, i.e., with the Jurchenic class marker *-nggi*, into all the Amur Tungusic languages (Oroch-Udeghe, Nanai-Ulcha-Orok), as well as into Neghidal, in the meaning 'relation (by descent or marriage)' (SSTM 2: 138–139).[5)]

A more concrete basis for conceptualizing bones as something fluid is, however, offered by the link between bone and marrow. Although hard bone was used as a material for tools, the most important aspect of bones for early human societies was the marrow, which was consumed as food. It is unlikely that tribal populations before the advance of modern medicine had an idea of the true physiological connection between bone marrow and blood, but it is interesting to note that the Tungusic peoples, at least, believed that certain diseases involved the parallel deterioration of both blood and bones. Among the Manchu and Manchurian Orochen groups, this belief was personalized in an evil spirit called *bushuku* (CMED 48), which, it was thought, "destroys the blood and bones" (Shirokogoroff 1935: 159–160).

3. The Turkic data

Interestingly, the connection between bone and marrow is confirmed by Turkic data. The Common Turkic word for 'bone' may be reconstructed roughly as **söngük* [søŋyk], as attested in Old Turkic (DTS 511). However, there is exceptionally much irregular variation in the form of this word, with

5) The authors thank José Andrés Alonso de la Fuente for a useful exchange of ideas concerning the extralinguistic reasons underlying the "fluidity" of bones. In this connection, see also his paper on the morphological background of the relevant classifiers (Alonso de la Fuente 2017).

the vowel of the initial syllable being represented also as *ü* or *i*, while the vowel of the second syllable appears also as *e* (*ä*), *ö*, or zero (Ø), yielding forms such as *süngük*, *singük*, *süngek*, *söngek*, *söngök*, *süngk*. At the same time, the medial consonant also varies, though more regularly, and is represented variously as *n*, *m*, *g*, *w*, *y*, or zero (Ø), resulting in forms such as *sünek*, *sömek*, *sögük*, *süwek*, *siwek*, *süyek*, *süök*, *söök*, and others (EST 7: 357–359, cf. also Räsänen 1949: 196, 198). Moreover, velar forms such as *songaq* (dialectally in Modern Uighur) are also attested. Yakut *unguox* | *omuox* would suggest Proto-Turkic **sungo:k* or **songo:k*, while Chuvash *shăm*(*ă*) would perhaps point to a sequence like **ïu* or **ïo* in the initial syllable.

There have been several attempts at explaining the etymology of Turkic **söngük*. The form would superficially suggest a deverbal noun in *-*Ok* (Erdal 1991: 224–261), in which case the base could have been the verb **süng-* | **söng-* 'to intrude (?),' from which the deverbal noun **süng.ü-g* 'spear' and the reciprocal form **süng.ü-sh-* 'to fight' are also derived (EDT 834–835, 838–839, 842, Erdal 1991: 270, 566–567). This is, however, semantically unlikely. A more credible connection is offered by the marginally attested Yakut relict form *uong* 'bone' < **so:ng* (Stachowski 1994: 205–206), which must be the root of *ung-uox* | *om-uox*, and which apparently represents a velar variant of **sö:ng*, as attested in Common Turkic *söng-gec* | *süng-güc* 'femur' (EST 7: 324). If so, Turkic probably originally had a basic noun **sö:ng* | **so:ng* (? < **sïong*) with the simple meaning 'bone.' This means also that **söngük* (in that case perhaps rather **söng-ek* or **söng-ik*) is not a deverbal noun, but a denominal derivative in *-V*k* (Erdal 1991: 40–44).

Irrespective of the formal origin of Turkic **söngük* (with all of its variants), it is relevant to note that the meaning 'bone' is also on the Turkic side connected with that of 'genetic lineage, tribe, clan,' as in Khakas *söök* 'bone; "seok" = a group of people related by blood' (XRS 505–506). More importantly, in Turkish, where the word is represented in the form *sümük* | *sümüh*, the meaning 'bone' is attested only dialectally in Anatolia (and in Azeri), while the meaning in Standard Turkish is 'mucus, snivel, slime' (DS 3713). The semantic connection of 'bone' with 'mucus' can hardly be explained otherwise than by assuming an association with bone marrow. If we accept the derivation of **söngük* from the primary root **sö:ng* | **so:ng* 'bone,' the transition must have proceeded from 'bone' to 'marrow' to 'mucus.' Possibly, a reference to 'cartilage' may also have been involved in the process (as proposed by Stachowski 1994: 206, KEWT 311).

The limited distribution of the meaning ‘mucus’ suggests that the semantic transition from ‘bone’ took place only recently and very locally in Southwestern Turkic. This was possible because Turkish retains another word for ‘bone,’ *kemik* | *gemik* < **kemük*, widely present in Common Turkic, but apparently absent in Chuvash and not attested in Old Turkic (EST 5: 36–38). Unlike Turkish, most other Turkic languages use this word in the specific meaning of ‘soft bone,’ ‘bone marrow,’ or also ‘cartilage’ (as already in Chaghatai), suggesting that in this case the semantic development has been from ‘marrow’ to ‘bone.’ This conclusion is, at least superficially, corroborated by the possible connection with the verb **kem*(-)*ür*- ‘to gnaw’ (Stachowski 1994: 203–204, KEWT 216), as attested also in Old Turkic (DTS 297, EDT 723). If this is so, **kem-ük* would make a better case for being a deverbal noun than **söngük*. Indeed, the verb **kemür*- is often used in connection with **söngük*, as in †*ol söngük kemürdi* ‘he sucked the marrow from the bone’ (Mahmud al-Kashgari CTD 2: 8).[6)]

The etymology of Turkic **kemük* is complicated by the fact that a related item is also present in Mongolic in the shape **kemi* ‘soft bone, bone marrow,’ which yields the derivatives **kemi-si*- ‘to develop blood and marrow in the bones’ (MED 451) and **kemi-le*- > *kemele*- | *kemeli*- ‘to gnaw (especially a bone)’ (Nugteren 2011: 410). A further connection is offered by Manchu *kemin* ‘marrow, medulla, porous matter in the bones’ (CMED 231), ‘clotted blood, bloody marrow’ (SSTM 1: 448). All these words have conventionally been considered to be cognates in the “Altaic” framework (VEWT 251), but it is immediately clear that the Manchu item (*kemi-n*), which has no derivatives and no analogies elsewhere in Tungusic, must reflect a rather recent borrowing from Mongolic (so also Rozycki 1994: 137).

The Turko-Mongolic parallel offers more challenges for diachronic explanation. Mongolic **kemi* is formally an underived bisyllabic noun that cannot represent a direct “cognate” of the Turkic derived noun **kemük*, which seems to be based on the verbal root **kem*-. The only way to link Turkic **kem*- with Mongolic **kemi* is to postulate a Pre-Proto-Turkic nomen-verbum with the shape **kemi*(-) with the meanings ‘bone; to gnaw (bone),’

6) While the asterisk (*) refers to unattested reconstructed forms, the dagger (†) indicates the assumed readings of actually attested data, originally written in another script (for the readings of the data of Mahmud al-Kashgari, cf. CTD 1: 53–69).

or also ‘marrow; to suck (marrow).’ For some reason, the nominal function of this root is preserved only in Mongolic (which also preserves the final vowel), while Turkic seems to have retained the verbal function, though only in the derivative **kem*(-)*ür-*. The noun was secondarily verbalized in Mongolic with the standard verbalizing suffix **-lA-*, while in Turkic the verb was nominalized with the nominalizing suffix **-Vk*.

It has also been proposed that Turkic **kemük* and Mongolic **kemi* might have no primary connection with the Turkic verb **kem-* ‘to gnaw’ (EDAL 1: 804), in which case **kemi* would always have been a nominal root, transmitted from Turkic to Mongolic—or vice versa—and then preserved in Turkic in the derivative **kemük* (? **kemi-k*). A further complication is offered by Mongolic **kem*(-)*ki-* ‘to bite, to snap with the jaws,’ often used in connection with bones, cf. also **kemki-deg* ‘bloody marrow in a bone’ (KW 225). This looks like a derivative from the basic root **kem-*, perhaps indicating another link with Turkic. However, at least synchronically, there is also an association with the Mongolic invariable root **kemke* ‘asunder’ and its derivatives, including **kemke-ci-* ‘to smash,’ **kemke-le-* | **kemki-le-* ‘to crush,’ **kemke-rkei* ‘broken’ (MED 451–452). Another item often quoted in this connection is Turkic †*kemdi-* ‘to strip (a bone of meat)’ : †*kemdük süngük* ‘a bone which has been stripped of meat’ (EDT 722, Stachowski 1994: 204). For the time being, it appears impossible to reach a definitive conclusion from these data.

Other items occasionally mentioned in connection with Turkic **kemük* and Mongolic **kemi* include Tungusic **xuma-n* ‘bone marrow’ > Manchu *um-han* | *um-gan* (CMED 390–391), and Samoyedic **kayma* (SW 58) id. Both items date back to the protolanguages concerned. The Manchu form is interesting, since it would, somewhat unexpectedly, seem to contain the class marker for countable units **-gtA*, i.e., ? < **xuma-gta-n*, as also observed in its homonym *umhan* | *umgan* ‘egg’ < **umo*(:)*-gta-n* (SSTM 2: 266–267, 269). However, the comparison of Tungusic **xuma-* with Turko-Mongolic **kem-* : **kemi* (EDAL l.c.) is out of question for obvious phonological reasons. Samoyedic **kayma* would appear to offer more prospects for a reasonable comparison, but the phonological correspondences are nevertheless too loose to make a convincing case (cf. Joki 1952: 220–221), unless we are dealing with a very ancient pre-protolanguage-level contact.

4. Conclusion

Although many details inevitably remain obscure, it has to be concluded that the Turko-Mongolic data illustrate how closely associated the meanings of 'bone' and 'marrow' were in early nomadic societies, for which bone marrow was an important source of nutrition. Under such circumstances it was natural that transitions could take place in both directions between the two meanings, as is the case in Turkic **kemük* 'marrow' > 'bone' and **söngük* 'bone' > 'marrow.' The physical fluidity of bone marrow, and its association with blood also explain why Mongolic **ya-s.u/n* 'bone' and Tungusic **gira-m-sa* | *gira-nggi* contain the class markers normally attested in items denoting liquids and other similar homogeneous substances. Obviously, these forms, which synchronically only refer to 'bone,' must be very old and may originally, and perhaps primarily, have also referred to 'marrow.' As a further development, the meaning 'bone,' but apparently not the meaning 'marrow,' has become associated with the concept of 'genetic lineage.'

References

Alonso de la Fuente, José Andrés. 2017. On internal reconstruction, morphological restructuration and nominal classes in Manchu. *Acta Orientalia Academiae Scientiarum Hungaricae* 70. 347–370. Budapest: Akadémiai Kiadó.

Benzing, Johannes. 1956. *Die tungusischen Sprachen: Versuch einer vergleichenden Grammatik* (Akademie der Wissenschaften und der Literatur, Abhandlungen der Geistes- und sozialwissenschaftlichen Klasse 11). Mainz: Franz Steiner Verlag.

Doerfer, Gerhard. 1978. Classification problems of Tungus. In Gerhard Doerfer & Michael Weiers (eds.), *Beiträge zur nordasiatischen Kulturgeschichte.* Tungusica 1, 1-26. Wiesbaden: Otto Harrassowitz.

Erdal, Marcel. 1991. *Old Turkic word formation: A functional approach to the lexicon* 1–2. Wiesbaden: Otto Harrassowitz.

Janhunen, Juha. 1990. *Material on Manchurian Khamnigan* Mongol (Castrenianumin toimitteita 37). Helsinki: Finno-Ugrian Society.

Janhunen, Juha. 1996. Prolegomena to a comparative analysis of Mongolic and Tungusic. In Giovanni Stary (ed.), *Proceedings of the 38th Permanent International Altaistic Conference*, 209-218. Wiesbaden: Harrassowitz Verlag.

Janhunen, Juha. 2003. Proto-Mongolic. In Juha Janhunen (ed.). *The Mongolic languages* (Routledge language family series), 1-29. London: Routledge.

Janhunen, Juha. 2017. Issues of comparative Uralic and Altaic studies (3): The Turkic plural in *-s. *Altai Hakpo* 27. 155–168. The Altaic Society of Korea.

Joki, Aulis J. 1952. *Lehnwörter des Sajansamojedischen* (Mémoires de la Sociéte Finno-Ougrienne 103). Helsinki: Suomalais-Ugrilainen Seura.

Nugteren, Hans. 2011. *Mongolic phonology and the Qinghai-Gansu languages* (LOT 289). Proefschrift: Netherlands Graduate School of Linguistics.

Poppe, Nicholas. 1955. *Introduction to Mongolian comparative studies* (Mémoires de la Société Finno-Ougrienne 110). Helsinki: Suomalais-Ugrilainen Seura.

Poppe, Nicholas. 1960. *Vergleichende Grammatik der altaischen Sprachen Teil I: Vergleichende Lautlehre*. (Porta Linguarum Orientalium Neue Serie 4). Wiesbaden: Otto Harrassowitz.

Potanin. 1893. *Тангутско-тибетская окраина Китая и центральная Монголія. Путешествіе Г. Н. Потанина 1884–1886, 1–2*. С.-Петербургъ: Типографія А. С. Суворина.

Ramstedt, G. J. 1952–1966. *Einführung in die altaische Sprachwissenschaft* 1–3. Pentti Aalto (ed.) (Mémoires de la Société Finno-Ougrienne 104: 1–3). Helsinki: Suomalais-Ugrilainen Seura.

Räsänen, Martti. 1949. *Materialien zur Lautgeschichte der türkischen Sprachen* (Studia Orientalia 15). Helsinki.

Rozycki, William. 1994. *Mongol elements in Manchu* (Indiana University Uralic and Altaic Series 157). Bloomington, Indiana: Indiana University, Research Institute for Inner Asian Studies.

Shirokogoroff, S. M. 1935. *Psychomental complex of the Tungus*. London: Kegan Paul, Trench, Trubner & Co., Ltd.

Stachowski, Marek. 1994. Über zwei Namen für ‘Knochen’ in den Türksprachen. *Folia Orientalia* 30. 203–207. Cracow: Polish Academy of Sciences.

Zhaonasitu 照那斯圖 [Junast] & Li Keyu 李克郁. 1982. 土族語民和方言概述. 民族語文研究文集. 西寧: 青海人民出版社.

Lexical sources

CDSP = Yamamoto Kengo 山本謙吾. 満洲語口語基礎語彙集. *A Classified Dictionary of Spoken Manchu, with Manchu, English and Japanese Indexes*. 東京: 東京外国語大学 アジア・アフリカ言語文化研究所, 1969.

CMED = Jerry Norman, with the assistance of Keith Dede and David Prager Branner. *A Comprehensive Manchu-English Dictionary*. Harvard-Yenching Institute Monograph Series 85. Cambridge (Massachusetts): Harvard University Press, 2013.

CTD = Robert Dankoff, in collaboration with James Kelly. Maḥmūd al-Kāšγarī: *Compendium of the Turkic Dialects*. Edited and Translated, with Introduction and Indices, vols. 1–3. Sources of Oriental Languages and Literatures 7. [Cambridge, Mass.:] Harvard University Printing Office, 1982–1985.

DMF = A[ntoine] Mostaert & A[lbrecht] de Smedt. *Dictionnaire monguor-français*. Le

dialecte monguor parlé par les mongols du Kansou occidental, IIIe partie. Pei-p'ing: Imprimerie de l'Université Catholique, 1933.
DS = Ömer Asım Aksoy et al. (eds.). *Türkiye'de halk ağzından derleme sözlüğü*, vols. 1–12. Second edition. Ankara: Türk Dil Kurumu Yayınları, 1993.
DTS = В. М. Наделяев & Д. М. Насилов & Э. Р. Тенишев & А. М. Щербак (eds.). *Древнетюркский словарь.* Ленинград: Издательство «Наука», 1969.
EDAL = Sergei Starostin & Anna Dybo & Oleg Mudrak, with assistance of Ilya Gruntov and Vladimir Glumov. *Etymological Dictionary of the Altaic Languages*, vols. 1–3. Handbuch der Orientalistik VIII.8. Leiden: Brill, 2003.
EDT = Sir Gerald Clauson. *An Etymological Dictionary of Pre-Thirteenth-Century Turkish.* Oxford: Oxford University Press, 1973.
EST = Э. В. Севортян & al. (eds.). *Этимологический словарь тюркских языков*, vols. 1–7. Москва: Издательство «Наука» et al., 1978–2003.
KEWT = Marek Stachowski. *Kurzgefaßtes etymologisches Wörterbuch der türkischen Sprache*. Kraków: Księgarnia akademicka, 2019.
KW = G. J. Ramstedt. *Kalmückisches Wörterbuch.* Lexica Societatis Fenno-Ugricae 3. Helsinki: Suomalais-Ugrilainen Seura, 1935.
MED = Ferdinand D. Lessing (ed.). *Mongolian-English Dictionary*. Berkeley and Los Angeles: University of California Press, 1960.
MQM = Li Keyu 李克郁 (ed.). *Mongghul Qidar Merlong.* 土漢詞典. 西寧: 青海人民出版社, 1988.
SSTM = В. И. Цинциус (ed.). *Сравнительный словарь тунгусо-маньчжурских языков*, vols. 1–2. Ленинград: Издательство «Наука», 1975–1977.
SW = Juha Janhunen. *Samojedischer Wortschatz: Gemeinsamojedische Etymologien.* Castrenianumin toimitteita 17. Helsinki: Suomalais-Ugrilainen Seura, 1977.
VEWT = Martti Räsänen. *Versuch eines etymologischen Wörterbuchs der Türksprachen.* Lexica Societatis Fenno-Ugricae 17. Helsinki. Suomalais-Ugrilainen Seura, 1969–1971.
XRS = О. В. Субракова (ed.). *Хакасско-русский словарь. Хакас-орыс сöстік.* Новосибирск: «Наука», 2006.

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